



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE

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Federal Operating Permit STATEMENT OF LEGAL AND FACTUAL BASIS

Waste Management Disposal Services of Virginia, Inc.
US Rt. 17, 0.25 miles south of US Rt. 17/ St. Rt. 601 intersection -
Gloucester County, Virginia
Permit No.: PRO40920

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Waste Management Disposal Services of Virginia, Inc. has applied for a Title V Operating Permit for its Gloucester County facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: _____
"Sparky" H. L. Lisle, Jr.
804-527-5148

Date: _____

Air Permit Manager: _____
James E. Kyle, P.E.

Date: _____

Deputy Regional Director: _____
Kyle Ivar Winter, P.E.

Date: _____

FACILITY INFORMATION

Permittee/Facility Name

Waste Management Disposal Services of Virginia, Inc.
Middle Peninsula Landfill and Recycling Facility
3714 Waste Management Way
Glenns, VA 23149

Responsible Official

Scott Thacker
Director of Disposal Operations
(804)727-9017

Contact Person

Jason Williams
Environmental Protection Manager
(804)814-5586

County-Plant Identification Number: 51-073-00032

Facility Description:

NAICS Code 562212 – Landfill; SIC Code 4593/4911

The Middle Peninsula Landfill and Recycling Facility (MPLRF) consists of a municipal solid waste landfill with gas collection and control system; and a energy recovery system. This source is located in an attainment area for all pollutants. The Middle Peninsula Landfill and Recycling Facility is a non-hazardous municipal solid waste (MSW) landfill located on U.S. Route 17, approximately 1.5 miles north of Adner, Virginia in Gloucester County. MPLRF is owned by the County of Gloucester and operated by Waste Management Disposal Services of Virginia, Inc. (WMDSV). The facility operates under the terms of Solid Waste Permit No. 572, issued by the DEQ Waste Division on August 15, 1994. The DEQ Solid Waste Permit specifies the allowable waste types that can be received and disposed of at MPLRF. In the Solid Waste Permit no restrictions are made prohibiting the disposal of commercial and industrial waste at the MPLRF. According to AP-42 (p 2.4-4), facilities disposing of MSW, commercial, and industrial waste are considered to be co-disposal facilities. The facility is a Title V major source of non-methane organic compounds (NMOC's) as defined under the New Source Performance Standard (NSPS) 'Subpart WWW - Standards of Performance for Municipal Solid Waste Landfills and the Landfill MACT (40 CFR 63 Subpart AAAA). Because the facility is subject to Subpart WWW, it is required to collect and control the emission of landfill gas and is subject to Title V permitting. The MPLRF began accepting waste in June of 1995. An Initial Design Capacity Report received from WMDSV on June 6, 1996 reported the MPLRF to have a design capacity of 35.4 million cubic meters or 46.3 million cubic yards. A Gas Collection and Control System (GCCS) plan was submitted by the source on June 12, 1998. This plan was approved on August 29, 2000. The initial Title V permit was issued on January 1, 2004 and amended on February 15, 2006. The initial [semi-]annual report was submitted on August 23, 2004. The July 17, 1998 NSR permit required that the landfill gas be burned in an open flare until there was sufficient gas to be burned in an enclosed flare. Operation of the open flare began on April 8, 1999. Operation of the enclosed flare began on November 6, 2000, with the open flare being retained as a backup. Both flares have been tested and met the operating and emissions limitations of 40 CFR 60.18. The facility currently operates under the terms of a State Major Air Permit revised March 7, 2008, which added eight Caterpillar gas only engine/generators. This air permit action is both a significant permit modification based on the March 7, 2008 State Major permit and a Title V renewal. The application was received on May 16, 2008 and was deemed timely and administratively complete. Therefore, the Title V permit application shield is in place.

The responsibility for compliance activities has been the subject of clarifications by US EPA (comments to include this notice was requested in prior Title V permit renewals for landfills with gas to energy plants). Federal Register (71 FR 53274), "The United States Environmental Protection Agency proposes "amendments to the Landfills NSPS, emission guidelines, Federal plan, and Landfills NESHAP to clarify who is responsible for compliance activities where multiple parties are involved in the ownership or operation of a landfill and the associated landfill gas collection, control, and/or treatment systems" (not applicable to this landfill at this time and retained in the Statement of Basis).

COMPLIANCE STATUS

A full compliance evaluation (FCE) of this facility, including a site visit, was last conducted on September 21, 2011. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance and is believed to be in compliance with 40 CFR 60, NSPS Subpart WWW and with 40 CFR 63, NESHAP Subpart AAAA requirements for the MSW landfill and GCCS system. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

1. **Equipment List** - Equipment at this facility consists of the following:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
F01	F01	John Zink	182.16 mmBtu/hour, HHV, 98%	Open Flare Model ZOF, 1999	F01	NMOC	07/17/1998
F02	F02	John Zink	182.16 mmBtu/hour, HHV, 98%	Enclosed Flare Model ZET, 1999	F02	NMOC	07/17/1998
SF1-SF8	SF1-SF8	Solar Flare, portable	50-160 SCFM size; <= 420 SCFM Total	(for odor control only)	SF1-SF8	NMOC	03/07/2008
EG1 – EG8	1-8	Caterpillar engine/ generators	10.1 mmBtu/hour each (HHV) (Built 03/08/2007 – 11/17/2007)	AFRC, regulated After cooler circuit and ESP common Breather	EG1 – EG8	NMOC	03/07/2008
BG1	BG1	Onan Model – DGFC 3371181 Diesel Generator (limited to 1000 hours per year)	288 HP/200 kW (Installed 8/12/1999; Built 1999)	NA	NA	NOx, CO, PM, PM-10, SO2, VOC	03/07/2008
Process Equipment							
LO-1 (includes GCCS-1)	NA	Landfill Operations, includes Gas Collection and Control System	46.3 million cubic yards, 3.22 billion scf LFG	See Flares above	GCCS-1	NMOC	07/17/1998

EMISSIONS INVENTORY

Emissions from the 2011 emissions inventory are summarized in the following tables.

2011 NMOC, HCL and Criteria Pollutant Emission in Tons/Year							
Emission Unit	HCL	NMOC	PM10/PM2.5	NO _x	CO	SO ₂	VOC
L01/All	0.15	39.3	17.6/16.8	104.4	194.9	4.7	15.3

FUEL BURNING EQUIPMENT REQUIREMENTS –

(Emission unit ID# LO-1, FO1, FO2, EG1 – EG8 and BG1)

Limitations, Standards for Air Emissions, and Operational Standards Overview

The Middle Peninsula Landfill and Recycling Facility (MPLRF) is subject to New Source Performance Standards (NSPS) under 40 CFR 60 Subpart WWW, the source is required to obtain a Title V permit. The MPLRF “MSW landfill is an area source landfill that has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m³ and that is not permanently closed as of January 16, 2003 (40 CFR 63.1935). MPLRF was subject to a State Operating Permit (SOP) issued July 17, 1998 and was superseded on March 7, 2008, State Major Modification permit, which referenced the NSPS Subpart WWW requirements and included NESHAP Subpart AAAA requirements, as well as established additional requirements. Applicable limitations and standards requirements from NSPS Subpart WWW [§§60.752 through 60.759], as well as from Subpart A (General Provisions) [§60.18], 40 CFR 60 NSPS Subpart WWW, Subpart JJJJ (not delegated to Virginia), 40 CFR 63 MACT ZZZZ and NESHAP Subpart AAAA [§§63.1930 through 63.1990], have been included in the Title V modification and renewal permit. The age and size of the landfill make it applicable to 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA. Additional limitation requirements from the State Major permit have also been included in the Title V permit.

All conditions of the NSR permit dated March 7, 2008 are contained in the Title V permit (except Condition 22 and the General Conditions). The Title V permit was completely revised to include the conditions from the NSR permit March 7, 2008 and those 40 CFR 60 NSPS **Subpart WWW**, 40 CFR 63 **MACT ZZZZ (not delegated to Virginia)**, and 40 CFR 63 **MACT AAAA** identified as applicable requirements. Some additional NSPS WWW requirements that have been the subject of US EPA comments were added to the SOB. The Landfill limitations are contained in conditions 2-15 of the NSR permit dated March 7, 2008.

The following Virginia Administrative Code and adopted New Source Performance Standards and Maximum Achievable Control Technology (MACT) standards have specific emission requirements that have been determined to be applicable:

- ▶ **40 CFR 60 Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills** – Applicable to the flares (F0-1 and F0-2) and other portions of the landfill gas collection and control system (GCCS-1).
- ▶ **40 CFR 63 Subpart AAAA – National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills** – Applicable to the entire landfill including the gas collection and control system (GCCS-1) and the flares (F0-1 and F0-2).
- ▶ **40 CFR 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engine (RICE)** - Applicable to the existing emergency generator (BG1) and any other applicable landfill gas engines (SF1-SF8), if replaced, modified or reconstructed.

LIMITATIONS

Additional applicable requirements for 40 CFR 60, Subpart WWW were included in the draft Title V permit. The active gas collection and control system (GCCS) requirements listed in this permit have been drafted to meet Part 70 requirements and those contained in the 40 CFR 60.752.(b)(ii)(A). The individual portions are included in the Statement of Basis verbatim.

Condition III.A.1 - The Gas Collection and Control System (GCCS)

40 CFR 60.752 (b)(2)(ii)(A), 40 CFR 753 and 40 CFR 758 (d))

60.752.(b)(ii)(A) An active collection system shall:

- (1) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment;
- (2) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of:
 - (i) 5 years or more if active; or
 - (ii) 2 years or more if closed or at final grade.
- (3) Collect gas at a sufficient extraction rate;
- (4) Be designed to minimize off-site migration of subsurface gas.

40 CFR 753 Operational standards for collection and control systems.

Each owner or operator of an MSW landfill with a gas collection and control system used to comply with the provisions of §60.752(b)(2)(ii) of this subpart shall:

(a) Operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:

- (1) 5 years or more if active; or
- (2) 2 years or more if closed or at final grade;

758(d) Except as provided in §60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.

(1) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under §60.755(b).

The following limitations are derived from Conditions 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14 and 15 of the March 7, 2008 State Major NSR permit issued to Waste Management Disposal Services of Virginia, Inc. (WMDSV).

NSR Condition 2 –control of NMOC emissions from the landfill (Condition III.A.2).

NSR Condition 3 – control efficiency of the enclosed flare for NMOC emissions (Condition III.A.3).

NSR Condition 4 – fugitive dust emissions (Condition III.A.4).

Condition III.A.5 - GCCS Operation

40 CFR 60.753 (b), (c) and (d)

(b) Operate the collection system with negative pressure at each wellhead except under the following conditions:

(1) A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in §60.757(f)(1);

(2) Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan;

(3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Administrator;

(c) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55 °C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

(1) The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart.

(2) Unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart, the oxygen shall be determined by an oxygen meter using Method 3A or 3C except that:

(i) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;

(ii) A data recorder is not required;

(iii) Only two calibration gases are required, a zero and span, and ambient air may be used as the span;

(iv) A calibration error check is not required;

(v) The allowable sample bias, zero drift, and calibration drift are ±10 percent.

(d) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

Condition III.A.6 - Operating Parameters

40 CFR 60.755(e)

(e) The provisions of this subpart apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices.

Condition III.A.7 - GCCS Shut down

40 CFR 60.753(e)

(e) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with §60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour; and

Condition III.A.8 - Operational Integrity

40 CFR 60.753 (f)

(f) Operate the control or treatment system at all times when the collected gas is routed to the system.

Condition III.A.9 - Placement of New Wells

40 CFR 60.755 (b)

(b) For purposes of compliance with §60.753(a), each owner or operator of a controlled landfill shall place each well or design component as specified in the approved design plan as provided in §60.752(b)(2)(i). Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of:

- (1) 5 years or more if active; or
- (2) 2 years or more if closed or at final grade.

NSR Condition 7 – limiting the (BG1) emergency generator to 1000 hours per year (Condition III.A.10).

NSR Condition 8 – limits the maximum throughput of landfill gas for the facility (Condition III.A.11).

NSR Condition 9 – establishes the approved fuels for all combustion equipment (Condition III.A.12).

NSR Condition 10 – landfill operation is subject to the NSPS, Subpart WWW (Condition III.A.13).

NSR Condition 12 – places emission limits on the eight Caterpillar engines (Condition III.A.14).

NSR Condition 13 – places emission limits on the open or enclosed flare devices (Condition III.A.15).

Condition III.A.16 – Emissions Limit

40 CFR §§63.6590(a)(2)(iii)

Subpart ZZZZ—Standards of Performance for Reciprocating Internal Combustion Engine (RICE) New; but no numerical or work practices at this time. The installed spark ignited engines were manufactured between March 8, 2007 and November 17, 2007. This is prior to the date in 40 CFR 60 Subpart JJJJ §60.4230 (a)(4) (ii) which identifies lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that were manufactured on or after January 1, 2008 as applicable. Therefore, 40 CFR 60 Subpart JJJJ does not apply unless or until the engines are replaced, modified or reconstructed. No further requirements apply for such engines under 40 CFR63, Subpart ZZZZ §63.6590(c).

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006 (NSR permit dated March 7, 2008).

40 CFR §§60.4230 - 60.4246

Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (not applicable because of the manufactured date of each engine (EG1 - EG8)).

What This Subpart Covers

§ 60.4230 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (6) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP; (Note: EG1 - EG8 (Built 03/08/2007 – 11/17/2007))

(iii) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).

(5) Owners and operators of stationary SI ICE that are modified or reconstructed after June 12, 2006, and any person that modifies or reconstructs any stationary SI ICE after June 12, 2006.

(6) The provisions of § 60.4236 of this subpart are applicable to all owners and operators of stationary SI ICE that commence construction after June 12, 2006.

§ 60.4236 What is the deadline for importing or installing stationary SI ICE produced in previous model years?

(a) After July 1, 2010, owners and operators may not install stationary SI ICE with a maximum engine power of less than 500 HP that do not meet the applicable requirements in § 60.4233.

(b) After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in § 60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in § 60.4233 may not be installed after January 1, 2010.

Condition III.A.17 Emissions Limit

MACT ZZZZ §§63.6590(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

§§63.6590(c)

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines (See above). No further requirements apply for such engines under this part.

Condition III.A.18 – Emissions Limit

Subpart ZZZZ—Standards of Performance for Reciprocating Internal Combustion Engine (RICE)

The existing 200 kW emergency generator (BG1), a diesel or No. 2 fuel oil fired Reciprocating Internal Combustion Engine (RICE) was installed at the landfill in CY1999 and must comply with applicable requirements in 40 CFR § 63.6602, 40 CFR § 63.6605, 40 CFR § 63.6625, 40 CFR § 63.6640, 40 CFR § 63.6645, 40 CFR § 63.6650, 40 CFR § 63.6655, 40 CFR § 63.6660, and Subpart ZZZZ –Tables for Existing emergency or black start CI stationary RICE (unless replaced or modified). The requirements for 40 CFR part 60 subpart IIII do not apply at this time because BG1 is not subject to the subpart. The Condition III.A.18 is a verbatim list of emergency generator located at an area source applicable requirements for 40 CFR 63 subpart ZZZZ (not delegated to Virginia at this time).

NSR Condition 14 – visible emission limits for combustion devices, less the open flare (Condition III.A.19).

NSR Condition 15 – startup, shutdown and malfunction plan (Condition III.A.20).

PERIODIC MONITORING

Generally, the requirements of 40 CFR 64, Compliance Assurance Monitoring (CAM), apply to each emissions unit meeting all three of the following criteria on a pollutant-by-pollutant basis:

- ▶ The unit emits or has the potential to emit (in the absence of add-on control devices) quantities of one or more regulated air pollutants that exceed major source thresholds,
- ▶ The unit is subject to one or more emission limitations for the regulated air pollutants for which it is major before control, and
- ▶ The unit uses a control device to achieve compliance with one or more of these emission limitations.

The MPLRF does not meet the third of these requirements as the eight landfill gas only spark ignited engine/generators do not have add-on control devices and rely instead on passive controls inherent to the design of the diesel generators. CAM does not apply to the eight landfill gas only spark ignited engine/generators.

The EPA periodic monitoring guidance, dated September 18, 1998, states periodic monitoring is required for each emission point at a source, subject to Title V of the Act, which is subject to an applicable requirement. The MPLRF periodic monitoring is a combination of 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA requirements to monitor and control well pressure and parameter monthly (and as prescribed), surface monitoring design, quarterly surface monitoring, Surface monitoring corrective actions, monthly cover integrity, monthly landfill gas temperature and Stack Testing of the landfill gas only spark ignited engine/generators individually every five years (See test section).

Condition III.B.1 - Well Pressure

40 CFR 60.753 (g) and 40 CFR 60.755 (a)(3)

40 CFR 753 (g) If monitoring demonstrates that the operational requirements in paragraphs (b), (c), or (d) of this section are not met, corrective action shall be taken as specified in §60.755(a)(3) through (5) or §60.755(c) of this subpart. If corrective actions are taken as specified in §60.755, the monitored exceedance is not a violation of the operational requirements in this section.

40 CFR 755 (a) (3) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with §60.752(b)(2)(ii)(A)(3), the owner or operator shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under §60.753(b). If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.

Condition III.B.2 - Well Parameters

40 CFR 753 (g) and 40 CFR 60.755 (a)(5)

40 CFR 753 (g) If monitoring demonstrates that the operational requirements in paragraphs (b), (c), or (d) of this section are not met, corrective action shall be taken as specified in §60.755(a)(3) through (5) or §60.755(c) of this subpart. If corrective actions are taken as specified in §60.755, the monitored exceedance is not a violation of the operational requirements in this section.

40 CFR 60.755(a)(5) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator shall monitor each well monthly for temperature and nitrogen or oxygen as provided in §60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.

Condition III.B.3 - Surface Monitoring Design Plan

40 CFR 60.753(d) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

Condition III.B.4 Surface Monitoring

40 CFR 60.755(c) The following procedures shall be used for compliance with the surface methane operational standard as provided in §60.753(d).

- (1) After installation of the collection system, the owner or operator shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in paragraph (d) of this section.

Condition III.B.5 - Surface Monitoring

40 CFR 60.755 (c)(2) The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.

(3) Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of appendix A of this part, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.

Condition III.B.6 - Surface Monitoring Method of Operation

40 CFR 60.755 (d) Each owner or operator seeking to comply with the provisions in paragraph (c) of this section shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

- (1) The portable analyzer shall meet the instrument specifications provided in section 3 of Method 21 of appendix A of this part, except that "methane" shall replace all references to VOC.
- (2) The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.
- (3) To meet the performance evaluation requirements in section 3.1.3 of Method 21 of appendix A of this part, the instrument evaluation procedures of section 4.4 of Method 21 of appendix A of this part shall be used.

(4) The calibration procedures provided in section 4.2 of Method 21 of appendix A of this part shall be followed immediately before commencing a surface monitoring survey.

Condition III.B.7 - Exceedances

40 CFR 60.755 (c)(4)(i) through 60.755 (c)(4)(v)

(4) Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in paragraphs (c)(4) (i) through (v) of this section shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of §60.753(d).

(i) The location of each monitored exceedance shall be marked and the location recorded.

(ii) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be re-monitored within 10 calendar days of detecting the exceedance.

(iii) If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in paragraph (c)(4)(v) of this section shall be taken, and no further monitoring of that location is required until the action specified in paragraph (c)(4)(v) has been taken.

(iv) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in paragraph (c)(4) (ii) or (iii) of this section shall be re-monitored 1 month from the initial exceedance. If the 1-month re-monitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month re-monitoring shows an exceedance, the actions specified in paragraph (c)(4) (iii) or (v) shall be taken.

(v) For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Administrator for approval.

Condition III.B.8 Cover Integrity

40 CFR 60.755 (c) (5) The owner or operator shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

Condition III.B.9 Sampling Ports

40 CFR 60.756 (a) Each owner or operator seeking to comply with §60.752(b)(2)(ii)(A) for an active gas collection system shall install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and:

(1) Measure the gauge pressure in the gas collection header on a monthly basis as provided in §60.755(a)(3); and

(2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in §60.755(a)(5); and

(3) Monitor temperature of the landfill gas on a monthly basis as provided in §60.755(a)(5).

NSR Condition 5 – requirement to measure and monitor the landfill gas flow (Condition III.B.10).

NSR Condition 6 – monitoring of the two flares (Condition III.B.11).

Condition III.B.12 and 13 - Periodic Monitoring

9 VAC 5-80-110 E. Each permit shall contain terms and conditions setting out the following requirements with respect to monitoring:

1. All emissions monitoring and analysis procedures or test methods required under the applicable monitoring and testing requirements, including 40 CFR Part 64 and any other procedures and methods promulgated pursuant to § 504(b) or § 114(a)(3) of the federal Clean Air Act concerning compliance monitoring, including enhanced compliance monitoring. If more than one monitoring or testing requirement applies, the permit may specify a streamlined set of monitoring or testing provisions provided the specific monitoring or testing is adequate to assure compliance at least to the same extent as the applicable requirements relating to monitoring or testing that are not included in the permit as a result of such streamlining.

2. Where the applicable requirement does not require periodic testing or instrumental or non-instrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit, as reported pursuant to subsection F 1 a of this section. Such monitoring requirements shall assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement. Recordkeeping provisions may be sufficient to meet the requirements of subsection E 2 of this section.

3. As necessary, requirements concerning the use, maintenance, and, where appropriate, installation of monitoring equipment or methods.

RECORDKEEPING

Condition III.C.1 Well Inspections

40 CFR 60.753 (b)(1) – 753 (b)(3)

(b) Operate the collection system with negative pressure at each wellhead except under the following conditions:

(1) A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in §60.757(f)(1);

(2) Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan;

(3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Administrator;

Condition III.C.2 Surface Monitoring Plan

40 CFR 60.753 (d) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

Condition III.C.3 Design Capacity

40 CFR 60.758 (a) Except as provided in §60.752(b)(2)(i)(B), each owner or operator of an MSW landfill subject to the provisions of §60.752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which triggered §60.752(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

The Landfill recordkeeping requirements are contained in condition 16 of the NSR permit dated 03/07/2008 (Condition III.C.4). The permit includes requirements for annual total landfill gas used, annual placement of MSW in the landfill, control efficiency of the enclosed flare maintaining records of all monitoring and testing required by the permit and emergency backup generator operating hours.

Condition III.C.5 Operating Parameters

40 CFR 60.753 (c) & (d) and 40 CFR 60.758 (c) Except as provided in §60.752(b)(2)(i)(B), each owner or operator of a controlled landfill subject to the provisions of this subpart shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in §60.756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

(d) Except as provided in §60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.

(1) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under §60.755(b).

(2) Each owner or operator subject to the provisions of this subpart shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or non-degradable waste excluded from collection as provided in §60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in §60.759(a)(3)(ii).

40 CFR 60.758 (c) Except as provided in §60.752(b)(2)(i)(B), each owner or operator of a controlled landfill subject to the provisions of this subpart shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in §60.756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

Condition III.C.6 Collection System

40 CFR 60.758 (d)(1) Except as provided in §60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.

(1) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under §60.755(b).

(2) Each owner or operator subject to the provisions of this subpart shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or non-degradable waste excluded from collection as provided in §60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in §60.759(a)(3)(ii).

Condition III.C.7 Collection System

40 CFR 60.758 (e) Except as provided in §60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in §60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

Condition III.C.8 Malfunction

40 CFR 60.758 (c) Except as provided in §60.752(b)(2)(i)(B), each owner or operator of a controlled landfill subject to the provisions of this subpart shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in §60.756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

(1) The following constitute exceedances that shall be recorded and reported under §60.757(f):

(i) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28 oC below the average combustion temperature during the most recent performance test at which compliance with §60.752(b)(2)(iii) was determined.

Condition III.C.9 Training Records

This is a requirement to retain training records for five years per 9 VAC 5-80-110.

TESTING

The stack testing requirements are contained in conditions 17, 18 and 19 of the NSR permit dated 03/07/2008 (Condition III.D.1 - 3). The enclosed flare may be tested at any time. An initial performance test to determine the NO_x and CO emission rates from the LFG engines shall be performed, and demonstrate compliance, within 60 days after achieving maximum production rate at which LFG engines are operated, but no later than 180 days after initial startup (Completed). Also, a concurrent VEE for the each LFG engine shall be performed. The subsequent performance tests (Stack Test and VEE) required shall at a minimum be conducted once every five years on all eight LFG engines and before the operating permit renewal application for NO_x, CO and PM-2.5 (Condition III.D.2 and Condition III.D.3). PM-2.5 testing is now included because an approved method is available.

Condition III.D.4 - Nitrogen Testing

40 CFR 60.753 (c) (1) The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart.

Condition III.D.5 Oxygen Testing

40 CFR 60.753 (c)(2) Unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart, the oxygen shall be determined by an oxygen meter using Method 3A or 3C except that:

- (i) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;
- (ii) A data recorder is not required;

Condition III.D.6 Exit Velocity

40 CFR 60.18 (f) (4) The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

Condition III.D.7 - Test Methods

9 VAC 5-80-110

40 CFR 60.754(b) (5) The owner or operator may use other methods to determine the NMOC concentration or a site-specific k as an alternative to the methods required in paragraphs (a)(3) and (a)(4) of this section if the method has been approved by the Administrator.

REPORTING

The Landfill monitoring requirements are contained in conditions 20 through 21 of the NSR permit dated 03/07/2008 (Condition III.E.1- 2). NSR Condition 20 – Subpart WWW monitoring requirements; certification/operation/calibration. NSR Condition 21 – monitoring for NSPS compliance.

40 CFR 60.752(b) and 40 CFR 60.756

40 CFR 60.752 (b) Each owner or operator of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, shall either comply with paragraph (b)(2) of this section or calculate an NMOC emission rate for the landfill using the procedures specified in §60.754. The NMOC emission rate shall be recalculated annually, except as provided in §60.757(b)(1)(ii) of this subpart. The owner or operator of an MSW landfill subject to this subpart with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters is subject to part 70 or 71 permitting requirements.

(1) If the calculated NMOC emission rate is less than 50 megagrams per year, the owner or operator shall:

(i) Submit an annual emission report to the Administrator, except as provided for in §60.757(b)(1)(ii); and

60.756(e) Each owner or operator seeking to install a collection system that does not meet the specifications in §60.759 or seeking to monitor alternative parameters to those required by §60.753 through §60.756 shall provide information satisfactory to the Administrator as provided in §60.752(b)(2)(i) (B) and (C) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator may specify additional appropriate monitoring procedures.

40 CFR 60.752(a)(iv) Operate the collection and control device installed to comply with this subpart in accordance with the provisions of §§60.753, 60.755 and 60.756.

40 CFR 60.753(g) If monitoring demonstrates that the operational requirements in paragraphs (b), (c), or (d) of this section are not met, corrective action shall be taken as specified in §60.755(a)(3) through (5) or §60.755(c) of this subpart. If corrective actions are taken as specified in §60.755, the monitored exceedance is not a violation of the operational requirements in this section.

40 CFR 60.755(a) Except as provided in §60.752(b)(2)(i)(B), the specified methods in paragraphs (a)(1) through (a)(6) of this section shall be used to determine whether the gas collection system is in compliance with §60.752(b)(2)(ii).

40 CFR 60.757(a) (3) An amended design capacity report shall be submitted to the Administrator providing notification of an increase in the design capacity of the landfill, within 90 days of an increase in the maximum design capacity of the landfill to or above 2.5 million megagrams and 2.5 million cubic meters. This increase in design capacity may result from an increase in the permitted volume of the landfill or an increase in the density as documented in the annual recalculation required in §60.758(f) [See below in Condition III.E.3].

Condition III.E.3 Landfill Reporting

40 CFR 60.752 (b)(2)(ii)(A), 40 CFR 60.753 to 40 CFR 60.757 and 40 CFR 63.1980

(ii) Install a collection and control system that captures the gas generated within the landfill as required by paragraphs (b)(2)(ii)(A) or (B) and (b)(2)(iii) of this section within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the emission rate is less than 50 megagrams per year, as specified in §60.757(c)(1) or (2).

(A) An active collection system shall:

(1) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment;

(2) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of:

(i) 5 years or more if active; or

(ii) 2 years or more if closed or at final grade.

(3) Collect gas at a sufficient extraction rate;

(4) Be designed to minimize off-site migration of subsurface gas.

Each owner or operator of an MSW landfill with a gas collection and control system used to comply with the provisions of §60.752(b)(2)(ii) of this subpart shall:

(a) Operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:

(1) 5 years or more if active; or

(2) 2 years or more if closed or at final grade;

(b) Operate the collection system with negative pressure at each wellhead except under the following conditions:

(1) A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in §60.757(f)(1);

(2) Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan;

(3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Administrator;

(c) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55 °C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

(1) The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart.

(2) Unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart, the oxygen shall be determined by an oxygen meter using Method 3A or 3C except that:

(i) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;

(ii) A data recorder is not required;

(iii) Only two calibration gases are required, a zero and span, and ambient air may be used as the span;

(iv) A calibration error check is not required;

(v) The allowable sample bias, zero drift, and calibration drift are ±10 percent.

(d) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

(e) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with §60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour; and

(f) Operate the control or treatment system at all times when the collected gas is routed to the system.

(g) If monitoring demonstrates that the operational requirements in paragraphs (b), (c), or (d) of this section are not met, corrective action shall be taken as specified in §60.755(a)(3) through (5) or §60.755(c) of this subpart. If corrective actions are taken as specified in §60.755, the monitored exceedance is not a violation of the operational requirements in this section.

(f) Each owner or operator of a landfill seeking to comply with §60.752(b)(2) using an active collection system designed in accordance with §60.752(b)(2)(ii) shall submit to the Administrator annual reports of the recorded information in (f)(1) through (f)(6) of this paragraph. The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under §60.8. For enclosed combustion devices and flares, reportable exceedances are defined under §60.758(c).

(1) Value and length of time for exceedance of applicable parameters monitored under §60.756(a), (b), (c), and (d).

(2) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under §60.756.

(3) Description and duration of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating.

(4) All periods when the collection system was not operating in excess of 5 days.

(5) The location of each exceedance of the 500 parts per million methane concentration as provided in §60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.

(6) The date of installation and the location of each well or collection system expansion added pursuant to paragraphs (a)(3), (b), and (c)(4) of §60.755.

(g) Each owner or operator seeking to comply with §60.752(b)(2)(iii) shall include the following information with the initial performance test report required under §60.8:

(1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;

(2) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;

- (3) The documentation of the presence of asbestos or non-degradable material for each area from which collection wells have been excluded based on the presence of asbestos or non-degradable material;
- (4) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on non-productivity and the calculations of gas generation flow rate for each excluded area; and
- (5) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and
- (6) The provisions for the control of off-site migration.

MACT AAAA - Notifications, Records, and Reports

§ 63.1980 What records and reports must I keep and submit?

- (a) Keep records and reports as specified in 40 CFR part 60, subpart WWW, or in the Federal plan, EPA approved State plan or tribal plan that implements 40 CFR part 60, subpart Cc, whichever applies to your landfill, with one exception: You must submit the annual report described in 40 CFR 60.757(f) every 6 months.
- (b) You must also keep records and reports as specified in the general provisions of 40 CFR part 60 and this part as shown in Table 1 of this subpart. Applicable records in the general provisions include items such as SSM plans and the SSM plan reports.

...

- (1) After submittal of your initial semiannual compliance report and performance test results for the bioreactor, you may delay submittal of the subsequent semiannual compliance report for the bioreactor until the date the initial or subsequent semiannual compliance report is due for the conventional portion of your landfill.
- (2) You may delay submittal of your subsequent semiannual compliance report by no more than 12 months after the due date for submitting the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) for the bioreactor. The report shall cover the time period since the previous semiannual report for the bioreactor, which would be a period of at least 6 months and no more than 12 months.
- (3) After the delayed semiannual report, all subsequent semiannual reports for the bioreactor must be submitted every 6 months on the same date the semiannual report for the conventional portion of the landfill is due.
- (g) If you add any liquids other than leachate in a controlled fashion to the waste mass and do not comply with the bioreactor requirements in §§63.1947, 63.1955(c) and 63.1980(c) through (f) of this subpart, you must keep a record of calculations showing that the percent moisture by weight expected in the waste mass to which liquid is added is less than 40 percent. The calculation must consider the waste mass, moisture content of the incoming waste, mass of water added to the waste including leachate recirculation and other liquids addition and precipitation, and the mass of water removed through leachate or other water losses. Moisture level sampling or mass balances calculations can be used. You must document the calculations and the basis of any assumptions. Keep the record of the calculations until you cease liquids addition.
- (h) If you calculate moisture content to establish the date your bioreactor is required to begin operating the collection and control system under §63.1947(a)(2) or (c)(2), keep a record of the calculations including the information specified in paragraph (g) of this section for 5 years. Within 90 days after the bioreactor achieves 40 percent moisture content, report the results of the calculation, the date the bioreactor achieved 40 percent moisture content by weight, and the date you plan to begin collection and control system operation.

Condition III.E.4 NSPS Report Detail

40 CFR 60.757 (f), 40 CFR 60.753 (b)(1) and 40 CFR 63.1980

40 CFR 60.757 (f) – See above Condition III.E.3.

40 CFR 60.753 (b) Operate the collection system with negative pressure at each wellhead except under the following conditions:

(1) A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in §60.757(f)(1);

40 CFR 63.1980 – See above Condition III.E.3.

Condition III.E.5 Notifications

40 CFR 60.7 (a)

§ 60.7 Notification and record keeping.

(a) Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, as follows:

(1) A notification of the date construction (or reconstruction as defined under §60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.

(2) [Reserved]

(3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.

(4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.

(5) A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with §60.13(c). Notification shall be postmarked not less than 30 days prior to such date.

(6) A notification of the anticipated date for conducting the opacity observations required by §60.11(e)(1) of this part. The notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.

(7) A notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by §60.8 in lieu of Method 9 observation data as allowed by §60.11(e)(5) of this part. This notification shall be postmarked not less than 30 days prior to the date of the performance test.

Condition III.E.6 - Requirements for Landfill Closure
60.752(b)(2)(v), 40 CFR 60.757(d - e)

(v) The collection and control system may be capped or removed provided that all the conditions of paragraphs (b)(2)(v) (A), (B), and (C) of this section are met:

(A) The landfill shall be a closed landfill as defined in §60.751 of this subpart. A closure report shall be submitted to the Administrator as provided in §60.757(d);

(B) The collection and control system shall have been in operation a minimum of 15 years; and

(C) Following the procedures specified in §60.754(b) of this subpart, the calculated NMOC gas produced by the landfill shall be less than 50 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

(e) Each owner or operator of a controlled landfill shall submit an equipment removal report to the Administrator 30 days prior to removal or cessation of operation of the control equipment.

(1) The equipment removal report shall contain all of the following items:

(i) A copy of the closure report submitted in accordance with paragraph (d) of this section;

(ii) A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and

(iii) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year.

(2) The Administrator may request such additional information as may be necessary to verify that all of the conditions for removal in §60.752(b)(2)(v) have been met.

FACILITY WIDE LIMIT

The facility has State Major NSR facility wide emission limits to keep it from being PSD applicable for NOx and CO. The requirements listed in the Title V permit for the individual units combined are valid for facility wide emissions and do not need to be repeated in this section. Only the emissions limits need to be listed. The Facility-wide emission limits are contained in condition 11 of the NSR permit dated 03/07/2008 (Condition IV.A.1).

Condition IV.A.2 - Opacity Standard.

9 VAC 5-50-20 A

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

- ▶ 9 VAC 5-50-80 "New/Modified source standard for Visible Emissions" – units may not emit greater than 20% opacity except for one six-minute period in any one hour of not more than 30% opacity (reference 40 CFR 60, Appendix A. Method 9).
- ▶ 9 VAC 5-50-20 "Facility and Control Equipment Maintenance or Malfunction" – at all times, the facility, including associated air pollution control equipment, must be maintained and operated in a manner consistent with air pollution control practices for minimizing emissions.

Condition IV.A.3 - Operational Standard.

9 VAC 5-50-20 E, 9 VAC 5-50-380, 9 VAC 5-20-180 A

This condition requires the permittee to minimize emissions.

Condition IV.A.4 - Operational Standard.

9 VAC 5-50-380, 9 VAC 5-20-180 C

This condition requires the permittee to report the expected duration air pollution control equipment will be out of service.

Condition IV.A.5 - Operational Standard.
9 VAC 5-50-380, 9 VAC 5-20-180 C

This condition requires the permittee to report the failure or malfunction of the pollution control equipment.

Periodic Monitoring

The EPA periodic monitoring guidance, dated September 18, 1998, states periodic monitoring is required for each emission point at a source, subject to Title V of the Act, which is subject to an applicable requirement. The MPLRF periodic monitoring for opacity is a combination of 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA requirements to monitor flares and landfill gas only spark ignited engine/generators(Stack Testing individually every five years). The periodic opacity monitoring requirement is covered in previous sections under Conditions III.A.11, III.A.12 (monthly) and stack testing Conditions III.D.1 – 3 (Every five years).

Section V. Insignificant Emissions Units list was updated to include the diesel storage tank and the leachate storage tank. The facility also listed additional insignificant units to be placed on the insignificant emissions unit list.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units from the application include the following:

Emission Unit No.	Emission Unit Description	Citation1 (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
T1 – T8	Engine Oil Day Tanks	5-80-720C	VOC	25 gallons
T9	Engine Oil Tank	5-80-720C	VOC	1,500 gallons
T10	Engine Used Oil Day Tank	5-80-720C	VOC	1,500 gallons
T11	Engine Coolant Tank	5-80-720C	VOC	750 gallons
CBV-1&2	Crankcase Breather Vents	5-80-720C	PM	NA
LP-1	Light Plant (Almand) Landfill or Shop	5-80-720C	NOx, CO, VOC, SOx, PM, HAPs	6 Kw
LP-2	Light Plant (Coleman) Landfill or Shop	5-80-720C	NOx, CO, VOC, SOx, PM, HAPs	20 Kw
GEN-1	Generator (Scale House)	5-80-720C*	NOx, CO, VOC, SOx, PM, HAPs	5 Kw
GEN-2	Generator (Administrative Office)	5-80-720C*	NOx, CO, VOC, SOx, PM, HAPs	5 Kw

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Emission Unit No.	Emission Unit Description	Citation1 (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
AST1	Above Ground Diesel Fuel Storage Tank - Mobile	5-80-720.C	VOC/HAPs	2,500 gallons
AST2	Used Oil Tank	5-80-720.C	VOC/HAPs	550 gallons
AST3	Hydraulic Fluid Storage Tank	5-80-720.C	VOC/HAPs	500 gallons
AST4	Used Oil Tank	5-80-720.C	VOC/HAPs	500 gallons
AST5	Transmission Fluid Storage Tank	5-80-720.C	VOC/HAPs	250 gallons
AST6	Motor Oil Tank	5-80-720.C	VOC/HAPs	500 gallons
AST7	Transmission Fluid Storage Tank	5-80-720.C	VOC/HAPs	250 gallons
LT-8	Leachate Storage Tank	5-80-720.C	VOC/HAPs	500,000 gallons
LT-9	Leachate Storage Tank	5-80-720.C	VOC/HAPs	500,000 gallons
AST14	Leachate Storage Tank	5-80-720.C	VOC/HAPs	11,000 gallons
AST10	AST containing water	5-80-720.C	N/A	550 gallons
AST11	AST containing leachate – mobile tank	5-80-720.C	VOC/HAPs	6000 gallons
AST12	AST containing water	5-80-720.C	VOC/HAPs	850 gallons
AST13	AST containing commix stormwater	5-80-720.C	N/A	6700 gallons
AST15	AST containing septic waste	5-80-720.C	N/A	25,000 gallons
SP19	Spray Painting (exempted from permitting by DEQ)	5-80-720.C	VOC/PM	450 gals/yr
AST20	AST containing Diesel Fuel	5-80-720.C	VOC/HAPs	1000 gallons
AST21	AST (currently empty)	5-80-720.C	VOC/HAPs	1000 gallons

Emission Unit No.	Emission Unit Description	Citation1 (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
AST22	AST containing propane	5-80-720.C	VOC/HAPs	1000 gallons
AST-23	Diesel Fuel Storage Tank – Split Tank	5-80-720.C	VOC/HAPs	12,000 gallons
AST-24	AST containing propane	5-80-720.C	VOC/HAPs	100 gallons
WELD-1	Welding Equipment (Mobile Truck)	5-80-720.C	PM	8 Kw
WELD-2	Welding Equipment	5-80-720.C	PM	19 Kw
Liquifix-1	Liquid Stabilization Tank	5-80-720.C	PM/VOC/HAPs	13,644 gallons
Liquifix-2	Liquid Stabilization Tank	5-80-720.C	PM/VOC/HAPs	13,644 gallons
Liquifix-3	Liquid Stabilization Tank	5-80-720.C	PM/VOC/HAPs	13,644 gallons
Liquifix-4	Liquid Stabilization Tank	5-80-720.C	PM/VOC/HAPs	13,644 gallons

* See Future Applicable Requirements.

¹The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application

9 VAC 5-80-720 B - Insignificant due to emission levels

9 VAC 5-80-720 C - Insignificant due to size or production rate

Section VI. Permit Shield and Inapplicable Requirements list was expanded to include additional federal and state requirements that the facility indicated were not applicable to this facility.

INAPPLICABLE REQUIREMENTS

The following inapplicable requirements were identified in the application and drafting of the Title V renewal permit.

Citation	Title of Citation	Description of Applicability
9 VAC 5-40-5800 and 40 CFR 60 subpart Cc	Emission Standards and Emission Guidelines for Sanitary Landfills	These regulations only apply to municipal solid waste landfills which commenced construction, reconstruction or modification before May 30 1991.
40 CFR 60 subpart Kb	Volatile Organic Liquid Storage Vessels	The leachate storage tanks have a vapor pressure below the 40 CFR 60 Subpart Kb thresholds. NSPS Subpart Kb does not apply based on the size of the all other listed tanks and from recordkeeping requirements as revised on October 13, 2003.

40 CFR 60 subparts IIII	NSPS CI Engines	The source categories cited in these regulations do not exist at the facility. NSPS Subpart IIII <u>does not</u> apply until the landfill gas only engines are modified in accordance with 40 CFR 60, NSPS Subpart IIII. The small diesel engine configuration and controls were last set by the NSR permit dated March 7, 2008.
40 CFR 64	Compliance Assurance Monitoring	The Landfill is subject to an NSPS that was proposed after 11/15/1990. Therefore, this regulation does not apply. Compliance Assurance Monitoring, 40 CFR Part 64, does not apply to the facility SI RICE do <u>not</u> have add-on pollution control devices.
40 CFR 75	Acid Rain Regulations	This landfill does not have a "Qualifying Facility."
40 CFR Parts 51,52,70 and 71	Title V Greenhouse Gas Tailoring Rule,	Title V Greenhouse Gas Tailoring Rule, 40 CFR Parts 51,52,70 and 71, does not apply to the facility as it is an existing source not currently subject to PSD for any pollutant.
MACT Subpart A - 40 CFR Part 63.6(d), 63.6(e), 63.6(h), 63.7(e)(1), 63.8(a)(4), 63.8(c)(5), 63.9(d), 63.10(b)(2)(i)-(v), 63.10(d)(3), 63.1(e)(2)(ii), 63.10(e)(4), and 63.11	General Provisions	Facility is exempted by complying with MACT Subpart ZZZZ requirements.

9 VAC 5-40-20 A.4	startup, shut down, and malfunction opacity exclusion	The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 A.4 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."
Existing Source Rule 4-8 (9 VAC 5-40-880)	Emission Standards for Fuel Burning Equipment	<i>"E. The provisions of this article do not apply to stationary internal combustion engines."</i>

Section VII. General Conditions

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upset, within one business day.

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.1-20.01:2 and §10.1-1185 of the *Code of Virginia*, and the "Department of Environmental Quality Agency Policy Statement NO. 3-2001".

This general condition cites the entire Article(s) that follow:

B.2. Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Permits for Stationary Sources

B.3. Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Permits for Stationary Sources

This general condition cites the sections that follow:

B. 9 VAC 5-80-80. "Application"

B.2. 9 VAC 5-80-150. "Action on Permit Applications"

B.3. 9 VAC 5-80-80. "Application"

B.4. 9 VAC 5-80-80. "Application"

B.4. 9 VAC 5-80-140. "Permit Shield"

B.5. 9 VAC 5-80-80. "Application"

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emissions reporting within 4 hours. Section 9 VAC 5-80-250 also requires malfunction reporting; however, reporting is required within 2 days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to this section including Title 5 facilities. Section 9 VAC 5-80-250 is from the Title 5 regulations. Title 5 facilities are subject to both Sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within 4 day time business hours of the malfunction.

In order for emission units to be relieved from the requirement to make a written report in 14 days, the emission units must have continuous monitors and the continuous monitors must meet the requirements of 9 VAC 5-50-410 or 9 VAC 5-40-41.

This general condition cites the sections that follow:

- F. 9 VAC 5-40-50. Notification, Records and Reporting
- F. 9 VAC 5-50-50. Notification, Records and Reporting
- F.1. 9 VAC 5-40-50. Notification, Records and Reporting
- F.1. 9 VAC 5-50-50. Notification, Records and Reporting
- F.2. 9 VAC 5-40-50. Notification, Records and Reporting
- F.2. 9 VAC 5-50-50. Notification, Records and Reporting
- F.3. 9 VAC 5-40-50. Notification, Records and Reporting
- F.3. 9 VAC 5-40-41. Emissions Monitoring Procedures for Existing Sources
- F.3.a. 9 VAC 5-40-41. Emissions Monitoring Procedures for Existing Sources

This general condition contains a citation from the Code of Federal Regulations as follows:

- F.2.a. 40 CFR 60.13 (h). Monitoring Requirements.

Failure/Malfunction Reporting

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in section 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation, see the comments on general condition F.

This general condition cites the sections that follow:

- U.2.d. 9 VAC 5-80-110. Permit Content
- U.2.d. 9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction

Section VIII. State-Only Enforceable Requirements: The citation for Toxic Pollutants was changed from 9 VAC 5, Chapter 50, Part II, Article 3: Standards of Performance for Toxic Pollutants (repealed section) to read: Article 5 (9 VAC 5-50-300 et. Seq.) of Part II of 9 VAC 5, Chapter 60.

State Only Applicable Requirements

The following terms and conditions are not required under the federal Clean Air Act or under any of its applicable federal requirements, and are not subject to the requirements of 9 VAC 5-80-290 concerning review of proposed permits by EPA and draft permits by affected states.

1. **9 VAC 5 Chapter 50, Part II, Article 2:** Standards of Performance for Odorous Emissions
The state only applicable requirement for an odor management plan (NSR Permit dated 03/07/2008, condition 32) is included in the Title V permit.
-

Streamlined Requirements

Streamlining of permit requirements for notification apply to this applicable requirement. The notification requirements were contained in condition 22 of the NSR permit dated 03/07/2008. These requirements to report LFG engine installation, startup, and performance tests have been completed.

60.752(a) - The owner or operator shall submit an initial design capacity report to the Administrator.

The facility submitted this report on June 6, 1996 (received in application dated December 12, 1996). This report contained all information required by Subpart WWW. Therefore, this requirement in Subpart WWW is obsolete.

60.757(f) - submittal of the initial annual report;
The facility submitted this report on June 9, 1997 (from DEQ analysis dated July 17, 1998). This report contained all information required by Subpart WWW. Therefore, this requirement in Subpart WWW is obsolete.

60.757(c) - submittal and DEQ approval of the collection and control system design plan;
The requirement to submit an initial Gas Collection and Control System (GCCS) design plan was completed on June 12, 1998 and was approved on August 29, 2000. The requirement to include certain specific information with the GCCS Design Plan has been met and has been streamlined out of the permit.

The requirement to include certain specific information with the initial performance test report for F0-1 and F0-2 [60.757] has been streamlined out. Initial performance testing for those units has been completed and reports have been submitted.

The currently installed flares, F0-1 and F0-2 initial performance testing consistent with the provisions of 40 CFR 60.8 and 60.18 was conducted and approved as follows:

	Testing Date	Test Report Received	Approved
F0-1	September 15, 2000	October 10, 2000	November 15, 2000
F0-2	November 15, 2000	January 8, 2001	January 25, 2001

FUTURE APPLICABLE REQUIREMENTS

The facility has not identified any of these requirements in the application.

Federal Register (71 FR 53274), "The United States Environmental Protection Agency proposes "amendments to the Landfills NSPS, emission guidelines, Federal plan, and Landfills NESHAP to clarify who is responsible for compliance activities where multiple parties are involved in the ownership or operation of a landfill and the associated landfill gas collection, control, and/or treatment systems" (not applicable to this landfill at this time).

COMPLIANCE PLAN

No compliance plan is needed for this facility.

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

A public notice regarding the draft permit was placed in The Daily Press newspaper in Gloucester County, Virginia on TBD, 2013.

Public comments were accepted from TBD, 2013, through TBD, 2013. TBD No comments were received from the public or the US EPA during the concurrent comment periods.
